

PORSF  
21.2  
1/10/07 vol.2



Rebekah Brooks  
<RBrooks@landauinc.com>  
01/10/2007 10:25 AM

To Elizabeth McKenna/R10/USEPA/US@EPA  
cc "Dost, Patty" <PDost@SCHWABE.com>, Mark Chandler  
<mchandler@timeoil.com>  
bcc

Subject Time Oil stormwater data

Elizabeth,

At Patty Dost's request, attached is documentation we submitted to DEQ on behalf of Time Oil Co. in 2002 providing data for stormwater samples we collected at the Time Oil NW Terminal in 2001-02.

The samples were collected from a storm drain manhole (SDM-1) located less than 200 ft from the point of discharge to the river. We took the samples here because the river outfall (i.e. end of pipe) is rarely exposed. All of these samples were collected prior to initiation of an interim action, which has diverted PCP-impacted water flowing through the storm drain to an onsite treatment system since October 2002. Therefore, analytical results from this location collected prior to October 2002 represent PCP concentrations in water that was being directly discharged to the river. Please note that additional samples were collected at this location prior to and after initiation of the interim action, as documented in Table 3 of the Source Control Evaluation Report.

Also, please note that I did not include the schedule and the analytical data tables for the first quarter 2002 groundwater event as listed in the cover letter because of their size and they are not related to the stormwater samples.

I hope this provides the information you need.

*Rebekah Brooks, L.G.*  
*Sr. Associate Hydrogeologist*  
*Landau Associates, Inc.*  
425-329-0271



<<April 2002 Monthly Rpt.pdf>> April 2002 Monthly Rpt.pdf

USEPA SF



1386248

May 9, 2002



Mr. Tom Roick  
Oregon Department of Environmental Quality  
2020 SW Fourth Avenue, Suite 400  
Portland, OR 97201-4987

**RE: TIME OIL NORTHWEST TERMINAL  
PORTLAND, OREGON**

Dear Mr. Roick:

On behalf of Time Oil Co, attached are the following items related to the Time Oil Northwest Terminal RI/FS:

- April 2002 monthly report to DEQ
- Revised schedule for Phase III RI activities; please note that the duration column on the Phase III schedule is in working days, not calendar days.
- Analytical data tables for the first quarter 2002 groundwater sampling event and for the stormwater sampling events.

You will notice that low level (less than 1 ug/L) pentachlorophenol (PCP) results were detected in each of the east property wells during this event. While there has been sporadic low level PCP concentrations detected in well LW-102S during previous events, this is the first PCP detection at each of the other east property wells. In our quality review of these data, it was determined that PCP was detected in laboratory method blanks within the specific data set containing these samples. This blank contamination could not be linked specifically to these samples, so the data were not qualified; however, it presents some doubt to the validity of the sample results. The laboratory indicated that the difference could be related to use of method 8270-SIM instead of method 8040 for the PCP analyses (sample reporting limits were equal for both methods). We will be resampling these wells for PCP as part of the second quarter 2002 event.

LANDAU ASSOCIATES, INC.

Rebekah Brooks  
Senior Hydrogeologist

RB/tam  
5/9/02 S:\WPROC\3\TRANSMIT FAX\Monthly Rpt\_Ltr.doc

Enclosure

cc: Mr. Kevin Murphy, Time Oil Co.  
Ms. Patricia Dost, Schwabe Williamson & Wyatt  
Mr. Mike Tischuk, Beazer East, Inc.

ENVIRONMENTAL | GEOTECHNICAL | NATURAL RESOURCES

130 2nd Avenue South • Edmonds, WA 98020 • (425) 778-0907 • fax (425) 778-6409 • [www.landauinc.com](http://www.landauinc.com)  
SEATTLE • SPOKANE • TACOMA • PORTLAND

**MONTHLY REPORT TO DEQ  
TIME OIL - NORTHWEST TERMINAL  
April 2002**

**SUMMARY OF WORK PERFORMED**

- Prepared and submitted the March 2002<sup>2</sup> monthly report to DEQ.
- Continued implementation of the groundwater interim action in the lower zone at RW-2, at an average flow rate of 6.4 gpm. Continued implementation of the groundwater interim action in the upper zone at HRW-1, at an average flow rate of 1.6 gpm. Approximately a total of 6.88 million gallons of groundwater have been recovered, treated, and discharged, with a total of about 391,000 gallons treated in April 2002. Analytical results from samples collected from the treatment system effluent indicate pentachlorophenol (PCP) is degraded to nondetectable concentrations or concentrations less than the permitted discharge limitations.
- Continued review of the system operations performance for the groundwater interim action system at RW-2 and HRW-1 and the onsite wastewater treatment system.
- Conducted groundwater level measurements and collected influent/effluent samples as part of HRW-1 startup activities.
- Began preparation of a technical memorandum documenting HRW-1 startup activities.
- Completed client review on the *Fourth Quarter 2001 Groundwater Report* and submitted to DEQ.
- Submitted the *Fourth Quarter 2001 Groundwater Interim Action Status Report* to DEQ.
- Completed data validation of the first quarter 2002 groundwater data and began preparation of the *First Quarter 2002 Groundwater Report*.
- Collected an additional stormwater sample from the storm drain manhole located closest to the river to confirm the PCP concentration for the sample collected in February 2002.
- Completed database conversion to a GIS format.
- Began an evaluation of methods to eliminate infiltration of groundwater to storm drain.
- Completed an updated wastewater discharge permit application with the City of Portland for discharge of treated water from the terminal treatment system into the sanitary sewer.
- Began preparation of a work plan for conducting a pilot test for remediation of upper zone groundwater using in situ chemical oxidation techniques.
- Continued evaluation of options for treatment/disposal of the stockpiled material.
- Completed client review of the *Phase III Preliminary Evaluation Report* and provided to DEQ.
- Continued internal review of a technical memorandum documenting the results of the Phase II supplemental sampling event.

## RESULTS COLLECTED

- The remainder of the first quarter 2002 groundwater data and stormwater data collected in February 2002. Tables containing these data are included with this report.

## PROBLEMS ENCOUNTERED AND STEPS TO RESOLVE

- No problems were encountered.

## WORK TO BE PERFORMED NEXT MONTH

- Prepare and submit monthly report to DEQ.
- Continue implementation of the groundwater interim action in the lower zone at RW-2 and in the upper zone at HRW-1. Continue full-scale treatment and discharge to POTW.
- Continue review of the system operations performance for the groundwater interim action system at RW-2 and HRW-1 and the onsite wastewater treatment system, including measurement of groundwater elevations in selected wells and sampling of treatment system influent/effluent.
- Conduct internal and client reviews of the *First Quarter 2002 Groundwater Report* and the *First Quarter 2002 Groundwater Interim Action Status Report*.
- Conduct internal and client review of a technical memorandum documenting startup activities at HRW-1.
- Complete preparation and conduct internal reviews of a work plan for conducting a pilot test for remediation of upper zone groundwater using in situ chemical oxidation techniques.
- Prepare a technical memorandum for assessing groundwater flow and for maximizing hydraulic capture from pumping at HRW-1 using a dye tracer and piezometers.
- Complete preparation of the *Phase II Supplemental Sampling Technical Memorandum* and provide to client for review.
- Receive comments from DEQ on the *East Property Remedial Action Plan*. Begin preparation of a response to DEQ's comments/work plan addendum.
- Prepare a contractor scope of work for the east property remedial action activities.
- Receive DEQ comments on the *Phase III Preliminary Evaluation Report*.
- Continue evaluation of availability of options for treatment/disposal of the stockpiled material.

**SUPPLEMENTAL PHASE II REMEDIAL INVESTIGATION  
SUMMARY OF STORM DRAIN MANHOLE LOCATION ANALYTICAL RESULTS  
TIME OIL NORTHWEST TERMINAL**

Page 1 of 1

Location	Lab ID	Date Collected	TOTAL PETROLEUM HYDROCARBONS (a)					PENTACHLOROPHENOL (µg/L)
			Gasoline (mg/L)	Mineral Spirits (mg/L)	Kerosene (mg/L)	Diesel (mg/L)	Lube Oil (mg/L)	
SDM-1	0109005-02	9/4/2001	0.250 U	0.250 U	0.630 U	0.630 U	0.630 U	11.5
	0111183-02	11/30/2001	NA	NA	NA	0.250 U	0.500 U	0.700
	ED34K	2/28/2002	NA	NA	NA	0.3	0.50 U	100
	EG43A	4/5/2002	NA	NA	NA	NA	NA	82
SDM-2	0109005-01	9/4/2001	0.250 U	0.250 U	0.630 U	0.630 U	0.630 U	0.500 U
	0111183-01	11/30/2001	NA	NA	NA	0.261	0.500 U	0.500 U
	ED34L	2/28/2002	NA	NA	NA	0.25 U	0.50 U	0.46

U = Indicates compound was analyzed for, but was not detected at the reported sample detection limit.

NA = Not Analyzed

(a) Samples collected in September, 2001 were analyzed using total petroleum hydrocarbon (TPH) method, NWTPH-HCID. Samples collected in November 2001 were analyzed using NWTPH-Dx.